

# Straw Bale Home in Organic Form

2013



This functional and well finished home can certainly be described by our catch cry of 'unique & individual'! A free flowing design of curved walls, the organic shape of the floor plan is wonderfully complemented by the use of straw bale as a building fabric and the striking roof line that also curves on two planes. A generous home, custom designed for a family of four, every aspect of the building reflects the owners passion for sustainability in construction that also delivers a high quality lifestyle. And that passion extended to their personal involvement in many aspects of construction including the fitting and rendering of the straw bales.

Designed by soft loud Architects of Warburton, the floor plan provides for all the external walls to largely be curved. Inside clever use of space has meant the floor plans remains functional without the awkward corners a non conventional shape can sometimes bring. Solar passive design brings Winter light and warmth into the North facing living area effectively. The thermal mass of the sealed slab and feature recycled redbrick wall absorb that energy and provide a necessary counterpoint to the well insulated external walls. These functional elements combine to create a sense of spaciousness that enhances the actual living space.

The curved and flowing roof line reduces the impact of the house in the landscape. The external finish of rendered straw bale combined with an array of glazing elements produces a distinctive and inviting façade. The design addresses the site restrictions including the slope of the site without being overly invasive or greatly affecting the amenity of neighbours.

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The structure of the building is predominately timber, either plantation grown and termite treated pine and laminated veneer lumber (LVL) or kiln dried Australian hardwood. The veranda posts are locally sourced bush poles. There's a variety of wall fabrics including:

- Rendered straw bale behind a structural timber stud wall
- Timber stud walls fitted with Proctor wrap breather membrane and rendered
- Radially sawn weatherboard claddings to timber framed Bay windows

We describe this house as a carpenter's house. The extensive timber skeleton that supports the roof and frames the walls was challenging to conceive and construct with the curved design extending to horizontal and vertical planes. The timber studs and plates were segmented, staggered, laminated and angled to create the flowing design that makes the home so distinctive. All the while structural norms of tie down, timber span and bracing for wind needed to be considered. We're very proud of our carpenters who rose to the challenge extraordinarily well and created something very fluid in form from rigid, rectangular timber.

The total list of energy efficient and sustainable design features is impressive:

- Lime and cement stabilised rendered straw bale walls
- Curved internal double brick Wall to the full height of the Raked Ceilings made from recycled red bricks
- Veranda Construction using F17 KDHW exposed Beams, Rafters and Battens with natural round bush poles
- Increased depth of studs to South side allows for increased insulation capacity
- Attic Construction lined for Children's play area with a 17mm pine plywood Floor above the Entry, Study, Bath, Laundry and WC
- Custom made, double glazed Australian Hardwood windows and external doors
- Custom made internal Glazed doors made from Australian hardwood and slumped glass
- Hot water service boosted by a wood fired stove and solar
- Tinted and sealed concrete slab for a final floor surface.
- Rendered block fireplace with heater insert

This is a home the owners can take great pride in, something unique in its vision and comfortable in it's form. Their efforts to bring the project to fruition included many hours of dedicated work and thorough planning. They managed to combine an Owner Builder ethic with a commercial arrangement with a sympathetic Builder to achieve a very fine result. We were glad to be that Builder and wish them many years of well deserved happiness in their very special home.